

REMARKS

Applicant requests favorable reconsideration and allowance of this application in view of the foregoing amendments and the following remarks.

Claims 1, 3-7, and 9-84 are pending in this application.

Claims 39-80 stand withdrawn from consideration. Claims 1, 7, 14, and 19 are the only independent claims under consideration.

Claims 1, 7, 14, and 19 have been amended. No new matter has been added.

Applicant appreciates the indication that Claims 5, 11, 14-24, 26, 28, 30, 32, 34, 36, 38, 83, and 84 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. However, Applicant has not rewritten those claims in that manner at this time because, for the reasons discussed below, Applicant believes the independent claims are patentable.

Claims 19-24, 26, 28, 30, 32, 34, 36, 38, and 84 have been objected to because they are device claims that are dependent from a method claim (Claim 1). Applicant submits that those claims do not depend from Claim 1. Instead, Claim 19 is an independent claim that merely refers to Claim 1 as a short-hand method of referencing the steps recited in Claim 1 for inserting a supplementary information item into digital data. However, in order to expedite prosecution and clarify this point, the steps of Claim 1 have been incorporated into the preamble of Claim 19. Favorable reconsideration and withdrawal of the objection are requested.

Claims 1, 3, 6, 7, 9, 12, 13, 25, 81, and 82 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,332,030 (Manjunath, et al.). Claims 4, 10, 25, 27, 29,

31, 33, 35, and 37 stand rejected under 35 U.S.C. §103(a) as being unpatentable over various combinations of Manjunath, et al. with one of U.S. Patent No. 6,359,998 (Cooklev), U.S. Patent No. 6,373,974 (Zeng), U.S. Patent No. 6,163,842 (Barton), U.S. Patent No. 6,370,258 (Uchida), and U.S. Patent No. 6,314,192 (Chen). Applicant respectfully traverses these rejections for the reasons discussed below.

As recited in independent Claims 1, 7, 14, and 19, the present invention recites, *inter alia*, the features that the number of decomposition levels (d) is dependent on image size and that only components in the lowest frequency sub-band are used in inserting a supplementary information item. Applicant submits that the cited art fails to disclose or suggest at least those features.

Manjunath, et al. discloses breaking down a signal into its frequency components, e.g., LL, LH, HL, and HH. However, that patent discloses using a maximum of two levels of decomposition. Therefore, it does not disclose or suggest using a number of levels dependent on image size. Further, that patent discloses both that high frequency components are likely to be modified by compression (col. 15, lines 59-61) and that changes in low-frequency sub-bands are more perceptible (col. 6, lines 30-31, and col. 15, lines 57-62). Therefore, Manjunath, et al. discloses that all sub-bands are used for embedding (Fig. 1 and col. 3, line 38) or that the mid frequencies of a DCT block are used (col. 15, line 62) or that an HH sub-band at the second decomposition level is used (called LL-HH, col. 21, line 5 and Fig. 26). However, that patent does not disclose or suggest that only components in the lowest frequency sub-band are used for embedding.

The other cited art is not understood to disclose or suggest at least the aforementioned features and is not understood to remedy the deficiencies of Manjunath, et al.

In view of the foregoing, Applicant submits that Claims 1, 7, 14, and 19 are patentable over the art of record. The rejected dependent claims are patentable for at least the same reasons as the independent claims, as well as for the additional features they recite.

Applicant submits that the foregoing amendments place this application in condition for allowance. Accordingly, entry of this Amendment After Final Rejection, reconsideration and withdrawal of the outstanding objection and rejections, and an early Notice of Allowance are requested.

Information Disclosure Statement

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed Form PTO-1449. A copy of each of the listed documents is also enclosed.

It is respectfully requested that the cited information be considered by the Examiner and that an annotated copy of the enclosed Form PTO-1449 be returned with the next official communication indicating that such information has been considered.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our below-listed address.

Respectfully submitted,



Attorney for Applicant
Brian L. Klock
Registration No. 36,570

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

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